

highest claim—the saving of human life. Every step towards this end should be hailed with enthusiasm." \* \* \*

"Too much zeal cannot be shown by physicians in relieving themselves from the weight of responsibility they may have incurred by innocently causing the increased destruction of human life. Let it not be supposed by the public that there is among us, either in theory or practice, any disregard of the unborn child. If such impression have already obtained, from our own negligence, the falsehoods of irregular practitioners, or otherwise, it should at once be removed." \* \* \*

"We should, as a profession, openly and with one accord appeal to the community in words of earnest warning, setting forth the deplorable consequences of criminal abortion—the actual and independent existence, from the moment of conception, of fetal life. And that the effort should not be one of words merely; we should, as a profession, recommend to the legislative bodies of the land the revision and subsequent enforcement of all laws, statutory or otherwise, pertaining to this crime, that the present slaughter of the innocents may to some extent, at least, be made to cease. For it is 'a thing deserving all hate and detestation, that a man in his very original, whiles he is formed, whiles he is enlived, should be put to death under the very hands and in the shop of nature.'" D. F. C.

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ART. XX.—*Report on the Smallpox, in the City of Providence, R. I., from January to June, 1859.* By EDWIN M. SLOW, M. D., Superintendent of Health. Providence, 1859.

THE smallpox was introduced into the city of Providence towards the close of the year 1858, by a gentleman who had been on a visit to New York. He was attacked soon after his return with varioloid. He had been vaccinated in childhood, forty-four years previously. The attack was a very mild one, requiring no medical attendance, and as no suspicions were entertained in regard to its character, no precautions were taken to prevent the spreading of the contagion. From this case were traceable, directly or indirectly, the seventy-three cases which occurred in the city during the first five months of the year 1859. Twenty-one of these cases were unmodified smallpox, and fifty-two varioloid; thirty-three were in males and forty in females. In January there were ten cases, three smallpox, seven varioloid; in February six cases, three smallpox, three varioloid; in March twenty-nine cases, nine smallpox, twenty varioloid; in April seventeen cases, four smallpox, thirteen varioloid; in May eleven cases, two smallpox, nine varioloid. In those under five years of age, there were nine cases of smallpox and three of varioloid; between five and ten years, there were four cases of smallpox and five of varioloid; between ten and fifteen years, there were one case of smallpox and eight of varioloid; between fifteen and twenty years, there were one case of smallpox and three of varioloid; and in those of twenty years and over, there were six cases of smallpox and thirty-three of varioloid. Of the whole number of cases forty-six occurred in Americans, and twenty-seven in foreigners; sixty-four in whites and nine in colored persons. Four of the cases only terminated fatally; of these one was three months old, one three years, one four years, and one thirty-five years; one was a male and three females; three were white, one was colored; all were of American parentage. One died on the 8th, one on the 9th, one on the 10th, and one on the 11th day after the appearance of the eruption. Of the whole number of cases of smallpox (twenty-one), eight were confluent and severe. Of these, four, or one-half, died. No case of distinct smallpox or of varioloid proved fatal. Of the four cases of confluent smallpox which recovered, one was an infant only seven weeks old when attacked; one was a boy five years old; one a boy of fifteen years; and one a colored man of thirty years.

Of the fifty-two cases of varioloid, four were very severe, and undistinguishable from confluent smallpox until the 7th or 8th day, when the sudden cessation of fever, and speedy desiccation of the pustules showed that the previous vacci-

nation had modified the disease, and, probably, saved the lives of the patients. All the severe cases of varioloid were in persons who had been only once vaccinated, and that many years previously. In many the marks of vaccination were not satisfactory. Eighteen of the cases of varioloid were extremely mild, with very few pustules, and attended with very little inconvenience to the patients. By one of the mildest of these cases, in which but six imperfect pustules were formed, the variolous contagion was communicated to a child, resulting in a severe attack of smallpox.

In nine of the cases of smallpox, including three of the confluent, and in thirteen of the cases of varioloid, no medicine whatever was administered.

The average duration of the four fatal cases of smallpox was nine and a half days from the commencement of the eruption.

All the facts connected with the occurrence of smallpox at Providence, R. I., in the early part of last year, prove in the clearest and most striking manner the protective power of vaccination. Between the 1st of January and the 16th of July, 1859, one child, vaccinated eight days after exposure to the contagion of smallpox, was attacked. Two other persons, vaccinated six days after exposure, had the varioloid. Beside these, not a single individual, so far as known, of the probably three thousand persons who were vaccinated or revaccinated, subsequently to the first of January, had the slightest indication of varioloid, notwithstanding their exposure to the variolous contagion. In one locality, twenty-one children vaccinated for the first time, were repeatedly, and for weeks continuously, exposed to smallpox, with entire impunity. It was known, in another case, where over two hundred had been vaccinated or revaccinated *after exposure* to smallpox or varioloid, that in no one of them was a single symptom of disease developed. In nearly all the cases of varioloid, some years, and in the greater proportion, many years had elapsed since vaccination. Not a single person who had ever been vaccinated, at any period of life, died from smallpox during the prevalence of the disease, and Dr. Snow is satisfied that no person took the smallpox in its unmodified form who had ever been vaccinated. Two individuals who had the disease and recovered, believed they had been vaccinated, but had no positive evidence of the fact, and exhibited no cicatrix upon the arm.

In regard to the supposed danger of the communication of other than the vaccine disease by vaccination, the whole of the facts developed during the prevalence of smallpox in Providence are opposed to the possibility of such communication. In no one of the 1203 persons vaccinated at the office of the Board of Health after the 1st of January, 1858, were injurious results experienced from the operation, and the same is the testimony of other physicians with respect to the cases vaccinated by them. With the care taken by every conscientious physician to obtain vaccine virus only from young and healthy children, Dr. Snow does not believe there is the least cause to fear the communication of any disease by vaccination besides that for the production of which the operation is performed.

Dr. Snow believes that there is no danger of the vaccine virus becoming effete by its being passed frequently through the human body, and rendering necessary its being renewed from the cow at short intervals. The virus used in Providence for vaccination had been in use for many years, and had consequently passed through a large number of persons. Still the vesicle produced by it is perfect in every respect, according to the description of Jenner. It follows precisely the described course, from the insertion of the virus to the separation of the scab, leaving a perfectly characterized vaccine cicatrix. Add to this the fact that the vaccinations with it have afforded invariably absolute protection against repeated and continued exposure for weeks, to infection from severe cases of smallpox.

Many persons, when exposed to the contagion of smallpox, contract the disease in a more or less modified form, although they had been effectually vaccinated. Though in this its modified form the disease is generally mild and without danger, still it is always unpleasant, and even in its mildest form may communicate smallpox to the unprotected, and varioloid to such as have been vaccinated. The production of the modified form of smallpox in the vaccinated has been

attempted to be accounted for in two ways. *First*, that although a first vaccination is successful and characteristic, it may, in certain cases, from constitutional insusceptibility or some other cause not well understood, afford only a partial or imperfect protection against smallpox; or *secondly*, that a first successful vaccination gives only during a certain period full and perfect protection, which becomes gradually impaired in the course of the organic changes constantly taking place in the human organism, especially the change from childhood to adult life.

"My opinion," says Dr. Snow, "has always been, that the first theory is true; but the facts I have collected during the past season, seem to favour the last theory. But whichever of them is true, *the necessity of revaccination is fully established*. A revaccination, with its peculiar modified effects, is the only certain proof that the first vaccination was good, and that the person is fully protected. And if a person has been vaccinated and revaccinated until no characteristic effect is produced by it, he may rest perfectly satisfied that he is safe from all danger of contracting either smallpox or varioloid."

The truth of this statement is established by a long series of the most imposing statistics.  
D. F. C.

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ART. XXI.—*Report of a Select Committee of the New York Chamber of Commerce on Quarantine*. Adopted July 7, 1852. 8vo. pp. 48.

CONSIDERED in all its aspects and relations, the subject of quarantine is one which presents strong claims to the serious consideration of every enlightened community. In the correctness of the views entertained in reference to it, and the propriety of the means by which those views are attempted to be carried out in practice, are involved not merely the interests of the mercantile classes, but the safety and comfort of every individual resident within the limits of a commercial city.

When we take into account the state of popular and even professional knowledge as to the nature and etiology of diseases, and the gross errors which prevailed as to the mode of their propagation, when quarantine was first adopted, little surprise need be entertained at the absurdities—the unwise restrictions—the personal annoyances by which it was characterized at its inauguration, and for a long period subsequently; nor at the controversy to which almost every question in relation to it—its efficiency as a means of preventing the introduction of disease—its proper duration, or the best plan for its practice and enforcement—has, from time to time, given rise. The only thing surprising in the case is, that the experience derived from a close observation of the results of quarantine at the different ports at which it has been most strictly enforced, and during a series of extensive epidemics of malignant disease, together with the light derived from our increased and more exact knowledge of the character and causation of many of the maladies as a barrier to which quarantine was, at first, more especially designed, that any difference of opinion should continue upon the subject—that there does not exist an almost unanimity of sentiment as to the actual objects to be attained by a judicious system of quarantine, as well as to the mode in which such a system must be administered in order that its legitimate purposes may be secured. There are certainly no inherent or any other very serious difficulties in the way of a satisfactory settlement of the entire question of quarantine. We are persuaded that were it left to a commission composed of enlightened and experienced physicians a system of quarantine could be devised, the faithful execution of which, while it secured to the community all the safety from the introduction of disease into its midst, that it is possible by the best devised and most strictly observed precautions to afford, would be divested of many, if not all, of the onerous burdens, arbitrary and unwise restrictions, pecuniary sacrifices, and positively mischievous results which are justly chargeable to some, at least, of the quarantine regulations now in force.

The discussion of the subject of quarantine by conventions held during the